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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/919,873 | 08/02/2001 | Hideo Namiki | 071671-0158 | 4172 |

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| EXAMINER |
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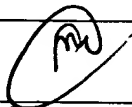
MEW, KEVIN D

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| ART UNIT | PAPER NUMBER |
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2664

DATE MAILED: 02/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|-------------------------------|---|
| Office Action Summary | Application No. 09/919,873 | Applicant(s) NAMIKI, HIDEO | |
| | Examiner Kevin Mew | Art Unit 2664 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>1, 3, 4, 5</u> . | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Response to Amendment

1. Applicant's Remarks/Arguments filed on 11/9/2005 with respect to claims 1-13 have been fully considered. Claims 14-16 have been newly added. Claims 1-16 are currently pending.
2. Acknowledgement is made of the clarification requested regarding the objection to the abstract recited in the previous Office Action. The clarification made by applicant is clear and correct and the objection to the specification and abstract has been withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Sugar (USP 5,790,538).

Regarding claim 7, Sugar discloses a synchronous data transmission system (synchronizing a receiving clock's frequency with a transmitting clock's frequency, see col. 1, lines 5-12) comprising a first and a second terminals and a synchronous transmission line (isochronous data transmission over a communication network, see col. 3, lines 33-49) connected between first and a second terminals (a receiving unit and a transmitting unit, see col. 3, lines 33-

49) for voice or image communication with each other (voice transmission), each terminal including a voice or image input means (PCM CODEC, see Fig. 7), a sampling clock generator (f_{local} , see Fig. 7), an A/D converter for digitalizing the output of the voice input means (A/D converter, see Fig. 7), a data generator (voice encoder), operable with the output of the sampling clock generators (f_{local} , see Fig. 7) for generating data on the basis of the output of the A/D converter (see Fig. 7), a transmission buffer receiving the generated data (PCM CODEC, see Fig. 7), a plurality of reception buffer stages supplied with the received data (Voice Sample FIFO, see element 6, Fig. 7) via an asynchronous transmission line, a data reproducer (Data Decoder, see element 4, Fig. 7) operable with the output of the sampling clock generator (f_{local} , see Fig. 7), for reproducing data from the plurality of reception buffer stages, a D/A converter for converting the reproduced data to an analog signal (D/A converter), a voice or image output means (PCM CODEC, see Fig. 7) for outputting voice based on the D/A converter output (see Fig. 7), the data stored in the transmission buffer having been packeted in certain time units (t) and being outputted via asynchronous transmission line interface to the asynchronous transmission line for the time unit (t), the data received from the asynchronous transmission line being stored via the asynchronous transmission line interface (DSP interface 38, see Fig. 7) in the reception buffer (Voice Sample FIFO, see element 6, Fig. 7), the data stored in the reception buffer being transmitted to the data reproducer (Resampler, see element 8, Fig. 7), the reception buffer being capable of storing data received from the asynchronous transmission line for a plurality of times ($n \times t$) in every unit time (voice samples are stored in Voice Sample FIFO, see col. 9, lines 15-26) and the data reproducer (Resampler, see element 8, Fig. 7) reproducing data when data for the plurality of times ($n \times t$) has been stored (see col. 9, lines 26-32 and 51-64).

Regarding claim 8, Sugar discloses the synchronous data transmission system according to claim 7, further comprising a sampling clock synchronizing means for synchronizing the sampling clocks of the sampling clock generators in the first and second terminals by inputting the output of the sampling clock generator in one terminal to the sampling clock generator in another terminal (synchronize a receiving clock's frequency with a transmitting clock's frequency by comparing the received clock rate to the local clock rate, see col. 1, lines 5-12 and col. 4, lines 56-61).

Regarding claim 9, Sugar discloses the synchronous data transmission system according to claim 7, wherein the frequency difference between the sampling clocks generated in the sampling clock generators in the first and second terminals is eliminated (a clock frequency recovery is utilized where the receiver clock frequency differs from the transmitter clock frequency, see col. 4, lines 12-26) by inputting the clock from the sampling clock generator in one terminal (Received clock rate) to the sampling clock generator in another terminal (Received clock rate is compared to the local clock rate, see col. 4, lines 56-61).

Regarding claim 10, Sugar discloses the synchronous data transmission system according to claim 7, wherein the sampling clock frequency of one terminal is made closer to the sampling clock frequency of another terminal by estimating the sampling clock on the basis of the data received directly from the asynchronous transmission line (Resampler's clock is adjusted such that the received clock rate is equal to the local clock rate, see col. 9, lines 15-41)

without having been processed in any manner by the one terminal (Fig. 1 shows that the clock frequency used for sampling is estimated based on the data received from the Voice Codeword FIFO).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6, 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugar (USP 5,790,538) in view of Baik (USP 5,790,592).

Regarding claim 1, Sugar discloses a synchronous data transmission system for transmitting (synchronizing a receiving clock's frequency with a transmitting clock's frequency, see col. 1, lines 5-12) such data as voice or image data (voice transmission, see Fig. 1) between a first (a transmitting unit) and a second terminals (a receiving unit) via an asynchronous transmission line (asynchronous data transmission over a communication network, see col. 3, lines 33-49), wherein:

the first and second terminals each comprise a data generator (voice encoder, see element 50, Fig. 7) and a data reproducer (voice decoder, see element 4, Fig. 7) operable under control of a clock from a sampling clock generator (Resampler, see element 8, Fig. 7).

Sugar does not explicitly show a transmission buffer and a plurality of reception buffer stages connected to the data generator and the data reproducer, respectively.

However, Baik discloses a first buffer (a transmission buffer, element 204, Fig. 2) and a plurality of reception buffer stages (first buffer and second buffer, elements 204, 206, Fig. 2) connected to an output port of the speech encoder (output port of the data generator, element 212A, Fig. 2) and an input port of the data reproducer (input port of the speech decoder, col. 4, lines 65-67, col. 5, lines 1-6 and element 212B, Fig. 2), respectively.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the voice playout system and method of Sugar with the teaching of Baik (Fig. 2) in using a first buffer and a second buffer for both speech encoding and decoding such that a first buffer is connected to an output port of the voice encode module of Sugar and a first buffer and a second are connected to the input port of the data decode module of Sugar. The motivation to do so is to provide an advantage in which data processed by the DSP and data to be processed are stored and inputted at the same time, thereby shortening the necessary time for data processing.

Regarding claim 2, Sugar discloses a synchronous data transmission system for transmitting (synchronizing a receiving clock's frequency with a transmitting clock's frequency, see col. 1, lines 5-12) such data as voice or image data (voice transmission, see Fig. 1) between a first (a transmitting unit) and a second terminals (a receiving unit) via an asynchronous transmission line (asynchronous data transmission over a communication network, see col. 3, lines 33-49), wherein:

the first and second terminals each comprise a data generator (voice encoder, see element 50, Fig. 7) and a data reproducer (voice decoder, see element 4, Fig. 7) operable under control of a clock from a sampling clock generator (Resampler, see element 8, Fig. 7).

Sugar does not explicitly show a transmission buffer and a plurality of reception buffer stages connected to the data generator and the data reproducer, respectively.

However, Baik discloses a first buffer (a transmission buffer, element 204, Fig. 2) and a plurality of reception buffer stages (first buffer and second buffer, elements 204, 206, Fig. 2) connected to an output port of the speech encoder (output port of the data generator, element 212A, Fig. 2) and an input port of the data reproducer (input port of the speech decoder, col. 4, lines 65-67, col. 5, lines 1-6 and element 212B, Fig. 2), respectively.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the voice payout system and method of Sugar with the teaching of Baik (Fig. 2) in using a first buffer and a second buffer for both speech encoding and decoding such that a first buffer is connected to an output port of the voice encode module of Sugar and a first buffer and a second are connected to the input port of the data decode module of Sugar. The motivation to do so is to provide an advantage in which data processed by the DSP and data to be processed are stored and inputted at the same time, thereby shortening the necessary time for data processing.

Regarding claim 3, Sugar discloses the synchronous data transmission system according to claim 1 or 2, wherein which further comprises a clock synchronizing means for synchronizing

clocks generated in the sampling clock generators in the first and second terminals (synchronize a receiving clock's frequency with a transmitting clock's frequency, see col. 1, lines 5-12).

Regarding claim 4, Sugar discloses the synchronous data transmission system according to claim 1 or 2, which further comprises a frequency difference eliminating means (clock frequency recovery module, see element 10, Fig. 1) for eliminating the frequency difference between the clocks generated in the sampling clock generators in the first and second terminals (clock frequency recovery is needed where the receiver clock frequency differs from the transmitter clock frequency, see col. 4, lines 12-26).

Regarding claim 5, Sugar discloses the synchronous data transmission system according to claim 1 or 2, wherein a synchronous data transmission line is connected to the data generators (voice encoder, see Fig. 7) and the data reproducers (voice decoder, see Fig. 7) in the first and second terminals (isochronous data transmission between a receiving unit and a transmitting unit over a communication network, see col. 3, lines 33-49).

Regarding claim 6, Sugar discloses the synchronous data transmission system according to claim 2, wherein the sampling clock generators in the first and second terminals are controlled (clock frequency recovery is utilized) on the basis of the received data from the asynchronous transmission line interface (if the average FIFO voice size increases, see col. 4, lines 12-26).

Regarding claim 11, Sugar discloses the synchronous data transmission system according to claim 2, which further comprises a clock synchronizing means for synchronizing clocks generated in the sampling clock generators in the first and second terminals (col. 3, lines 33-49, col. 4, lines 12-26).

Regarding claim 12, Sugar discloses the synchronous data transmission system according to claim 2, which further comprises a frequency difference eliminating means for eliminating the frequency difference between the clocks generated in the sampling clock generators in the first and second terminals (col. 3, lines 33-49, col. 4, lines 12-26).

Regarding claim 13, Sugar discloses the synchronous data transmission system according to claim 2, wherein a synchronous data transmission line (synchronous voice traffic, col. 2, line 41) is connected to the data generators and the data reproducers in the first and second terminals (synchronous voice traffic is connected to Voice Encode and Voice Decode modules, Fig. 7).

Regarding claims 14-16, Sugar discloses the synchronous data transmission system according to claim 1, wherein the plurality of reception buffer stages are configured to handle both data underflow and data overflow, without loss of data, due to different sampling clock rates output by the respective sampling clock generator provided in the first and second terminals (col. 3, lines 33-49, col. 4, lines 12-26).

Response to Arguments

5. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's argument with respect to claim 7 has been fully considered but they are not persuasive. In claim 7, applicant argued that the Sugar reference does not disclose "estimating the sampling clock on the basis of the data received directly from the asynchronous transmission line *without having been processed in any manner by the one terminal*," the Examiner respectfully disagrees. It is noted that the feature upon which applicant relies (i.e. *without having been processed in any manner by the one terminal*) is not recited in the rejected claim 7 but in claim 10. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Therefore, claim 7 stands rejected under 35 U.S.C. 102(b) as being anticipated by Sugar (USP 5,790,538).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 5,218,640 to Morio et al.

US Patent 5,604,737 to Iwami et al.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Mew whose telephone number is 571-272-3141. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'W. Chin', followed by a long horizontal line extending to the right.

WELLINGTON CHIN
SUPERVISORY PATENT EXAMINER